

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

The claims are not herewith amended, and are presented below merely for the convenience of the Examiner.

Listing of Claims:

1-20. Cancelled

21. (Previously Presented) A method to operate a storage area network (SAN) in a server environment in which multiple operating system images share one Fibre Channel adapter, the method comprising:

managing the SAN by a SAN Management software with at least a SAN Management server and at least a SAN Management client with a communication path to said Fibre Channel Adapter,

separating requests issued by the SAN Management server into at least two groups,
a first group is processed by the Fibre Channel adapter and the SAN on behalf of the SM Management client in place of operating system images which share the same Fibre Channel Adapter, corresponding to a trusted path, and

a second group is processed by the operating system images without the need to send or receive requests to or from the Fibre Channel adapter and the SAN.

22. (Previously Presented) The method according to claim 21, further comprising:

routing all information contained in unsolicited messages generated in the SAN and Fibre Channel adapter to the SAN Management server by the SAN management client.

23. (Previously Presented) The method according to claim 21, further comprising:

using Host Bus Adapter_Application Program Interface binding requests to modify a

firewall, and operating the communication path from the SAN Management client to the Fibre Channel adapter so that it cannot be modified or eavesdropped by an operating system image.

24. Cancelled

25. (Previously Presented) The method according to claim 21, further comprising:

accessing all information relevant for billing individual operating system images generated in the Fibre Channel adapter and SAN only through the SAN Management client on the trusted path.

26. (Previously Presented) The method according to claim 21, further comprising:

said SAN Management server providing authorization data to the SAN Management client to execute requests from said first group, and said SAN Management server and SAN Management client providing authorization data to the OS images to execute requests from said second group, and operating the OS images so that they are only enabled to execute a limited command set in the SAN.

27. Cancelled

28. Cancelled

29. (Previously Presented) A computer program product stored on a computer usable medium, comprising computer readable program, where the computer readable program when executed on a computer causes the computer to operate a storage area network (SAN) in an environment in which multiple operating system images (OS images) share one Fibre Channel adapter by operations of:

managing the SAN with at least a SAN Management server and at least a SAN Management client with a communication path to said Fibre Channel Adapter,
separating requests issued by the SAN Management server into at least two groups,

where a first group of requests is processed by the Fibre Channel adapter and the SAN on behalf of the SM Management client in place of operating system images which share the same Fibre Channel Adapter, corresponding to a trusted path, and

a second group of requests is processed by the operating system images without the need to send or receive requests to or from the Fibre Channel adapter and the SAN.

30. (Previously Presented) The computer program product as in claim 29, further comprising an operation of:

routing information contained in unsolicited messages generated in at least one of the SAN and Fibre Channel adapter to the SAN Management server by the SAN management client.

31. (Previously Presented) The computer program product as in claim 29, further comprising an operation of:

using Host Bus Adapter_Application Program Interface binding requests to modify a firewall interposed between said OS images and said Fibre Channel adapter.

32. (Previously Presented) The computer program product as in claim 29, further comprising an operation of:

operating the communication path from the SAN Management client to the Fibre Channel adapter so that it cannot be accessed by an operating system image.

33. (Previously Presented) The computer program product as in claim 29, further comprising an operation of:

accessing information relevant for billing individual operating system images generated in the Fibre Channel adapter and SAN only through the SAN Management client on the trusted path.

34. (Previously Presented) The computer program product as in claim 29, further comprising an operation of:

providing authorization data from the SAN Management server to the SAN Management client to execute requests from said first group of requests.

35. (Previously Presented) The computer program product as in claim 29, further comprising an operation of:

providing authorization data from the SAN Management server and the SAN Management client to the OS images to execute requests from said second group of requests.

36. (Previously Presented) The computer program product as in claim 29, further comprising an operation of enabling the OS images to execute a limited command set in the SAN.

37. (Previously Presented) The computer program product as in claim 29, wherein the SAN Management server is equipped with a SAN Management Client and a Remote Access Server (RA Server), further comprising an operation of maintaining authorization data for accessing the RA Server in at least one of the SAN Management server and the SAN Management Client.

38. (Previously Presented) The computer program product as in claim 37, further comprising an operation of operating the SAN Management Client as a router for requests from the SAN Management server to the RA server.

39. (Previously Presented) The computer program product as in claim 37, wherein the RA Server comprises a telnet/sshd server.

40. (Previously Presented) A storage area network (SAN) Management server, comprising:

a first interface to couple to a SAN Management client that comprises a trusted operating system (OS), said SAN Management client being coupled to a SAN via a SAN adapter; and

a second interface to couple to at least one untrusted operating system, said at least one untrusted OS being coupled to the SAN via the SAN adapter and via a unit for regulating access to the

SAN;

where said SAN Management server comprises logic for distinguishing a first set of requests from a second set of requests, where the first set of requests are processed in cooperation only with said SAN Management client, and where the second set of requests are processed at least in part by the at least one untrusted operating system.

41. (Previously Presented) The SAN Management server as in claim 40, where said first set of requests comprise at least one of a SAN request and a SAN adapter request, and said second set of requests comprise a request for untrusted OS configuration data.

42. (Previously Presented) A storage area network (SAN) Management client, comprising:

a trusted operating system (OS);

a first interface to couple to a SAN via a SAN adapter; and

a second interface to couple to a SAN Management server and to at least one untrusted operating system coupled to the SAN via the SAN adapter and via a controller for regulating access to said SAN;

said SAN Management client comprising logic for processing a first set of requests identified by the SAN Management server in cooperation only with said SAN Management server, where a second set of requests identified by the SAN Management server are processed at least in part by the at least one untrusted OS;

where said first set of requests comprise at least one of a SAN request and a SAN adapter request, where said second set of requests comprise a request for untrusted OS configuration data.

43. (Previously Presented) The SAN Management client as in claim 42, where the controller

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operates on top of said trusted operating system of said SAN Management client.